

Design and Implementation of Control Software/Firmware for Wireless Transceivers

Background

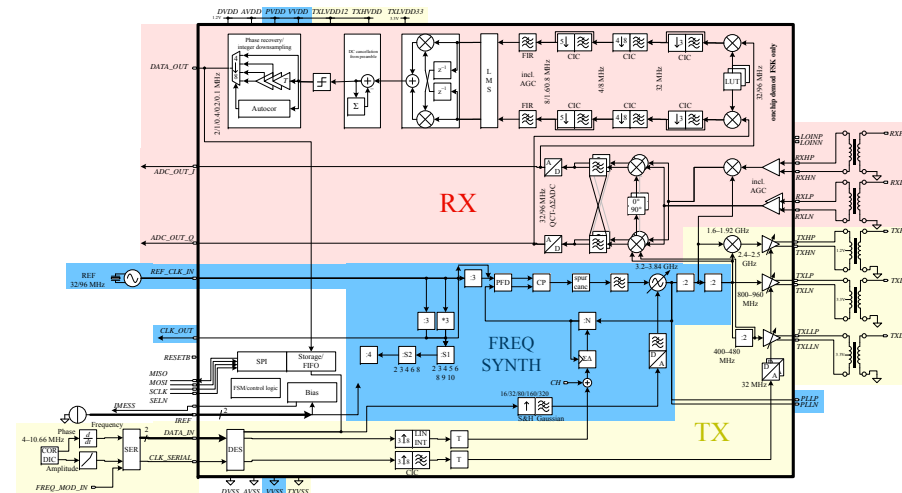
Standardization bodies (IEEE, ETSI, FCC, ...) and private consortia have created a multitude of different low power, low data rate wireless communication standards, like Bluetooth, SUN, 802.15.4 (Zigbee), 802.11ah and more. A proven wireless transceiver design of our institute is loosely based on these standards.

Task

To accompany ongoing work in our institute, a commercial wireless transceiver (TDA5340, CC2520 or AT86RF230) needs to be made usable for low power, low data rate, high flexibility wireless communication. Your task will be to implement a software/firmware framework for one of these transceivers. The code to be developed enables you to control and configure the transceiver as well as to supply it with payload to be sent through the air.

Parallel to your work, efforts are ongoing to develop linux kernel modules accessing identical wireless transceivers. This way, the wide array of already implemented wireless standards within the linux kernel could be reused.

Because of this ongoing work, detailed exchange of ongoing efforts, lessons-learned and gained insights both with Hiwis as well as your supervisor will be crucial.



Contact

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